

ABSTRACT

A substrate processing apparatus comprises a chamber **28** capable of processing a substrate **20**. A radiation source **58** provides radiation that is at least partially reflected from the substrate in the chamber. A radiation detector **62** is provided to detect the reflected radiation and generate a signal. A controller **100** is adapted to receive the signal and determine a property of the substrate **20** in situ during processing, before an onset of during or after processing of a material on the substrate **20**.